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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/726,083	12/02/2003	Ralf Kruse	071308.0489	3416
31625	7590	06/07/2004	EXAMINER	
BAKER BOTTS L.L.P. PATENT DEPARTMENT 98 SAN JACINTO BLVD., SUITE 1500 AUSTIN, TX 78701-4039			CUEVAS, PEDRO J	
			ART UNIT	PAPER NUMBER
			2834	

DATE MAILED: 06/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/726,083

Applicant(s)

KRUSE, RALF

Examiner

Pedro J. Cuevas

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 and 15-20 is/are rejected.
- 7) ☒ Claim(s) 14 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>12/03</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.
2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: Multiple Phase Pole Winding Pattern Having Parallel Wound Paths.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-12, 15-16, and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,519,266 to Chitayat.

Chitayat clearly teaches the construction of a high efficiency linear motor comprising:

at least two or $2 \times p$ poles forming p pole pairs (Figure 3);

at least one phase (Φ) by which the poles are wound and which has at least two or $2 \times p$ parallel paths (Figure 8), wherein:

at least two of the paths differ from one another in the winding of at least one of the poles (Figure 4),

at least one pole is wound by at least two paths (Figure 8),

at least one of the paths is involved in the winding of at least two poles (Figure 4),

the poles are wound by the paths so as to produce an essentially symmetrical electric loading of the phase (Figure 3),

the windings of the at least one pole which are assigned to the paths, differ from one another in respect of the turns counts (column 5, lines 31-36),

the sum of the turn's counts of all the paths is essentially the same for each pole,

at least one of the paths winds at least one of the poles more lightly / more lightly than the remaining poles,

of the at least one pole is formed by at least two slot coils, and the windings of the at least one pole which are assigned to the paths, differ from one another in respect of the turns counts of the slot coils of the pole,

the sum of the turns counts of all the paths is the same for each slot coil of the pole of which there is at least one,

the turn's counts of the paths are the same for the pole of which there is at least one,

each pole is formed by two slot coils, and wherein each path winds only one slot coil of each pole,

the poles are disposed evenly along a self-contained line, and

having a number of slots per pole per phase that is a positive integer.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 13, 17-18, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,519,266 to Chitayat in view of U.S. Patent No. 4,417,192 to Ghosh.

Chitayat disclose the construction of a high efficiency linear motor as described above.

However, it fails to disclose each path having at least two sub-sections, wherein each sub-section winds each pole with half a turn, and each sub-section is involved to the extent of no more than half turn in the winding of the same slot coil.

Ghosh teach the construction of a sectional motor starting winding circuit for three-phase motors comprising at least two coil sub-sections (Figure 2), wherein each sub-section winds each pole with half a turn, and each sub-section is involved to the extent of no more than half turn in the winding of the same slot coil (Figure 4), for the purpose of avoiding unilateral magnetic pull on the rotor during start-up (Abstract).

It would have been obvious to one skilled in the art at the time the invention was made to use the sectional motor starting winding circuit disclosed by Ghosh on the high efficiency linear motor disclosed by Chitayat for the purpose of avoiding unilateral magnetic pull on the rotor during start-up (Abstract).

7. With regards to claim 17 and 18, Ghosh disclose a winding implemented as a rotating field winding, and having slots in which the paths are laid.

Allowable Subject Matter

8. Claim 14 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. The following is a statement of reasons for the indication of allowable subject matter.

The prior art of record, taken alone or in combination, fails to teach the construction of a winding as described on claim 1, 10, and 11, further comprising two paths, wherein:

each path has three sub-sections;

each pole is formed by two slot coils; and

each slot coil is wound by two sub-sections of one of the paths and by one sub-section of another of the paths.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO-892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pedro J. Cuevas whose telephone number is (571) 272-2021. The examiner can normally be reached on M-F from 8:30 - 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg can be reached on (571) 272-2044. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2834

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Pedro J. Cuevas
May 27, 2004



KARL TAMAI
PRIMARY EXAMINER